

VARIABLE	OBJECTIVE RESPONSE RATE		
	<u>Corticosteroids</u>	<u>Antibiotics</u>	<u>PPIs</u>
	OR (95% CI); <i>p</i> - value	OR (95% CI); <i>p</i> - value	OR (95% CI); <i>p</i> - value
<b>Cohort</b> Pembrolizumab vs Chemotherapy	1.54 (1.17–2.03); <i>p</i> =0.0021	1.38 (1.07–1.79); <i>p</i> =0.0116	1.57 (1.13–2.20); <i>p</i> =0.0071
<b>Corticosteroids</b> Yes vs No	1.02 (0.67–1.55); <i>p</i> =0.9358	-	-
<b>Interaction</b> Corticosteroids*Cohort	<b>p=0.0033</b>	-	-
<b>Antibiotics</b> Yes vs No	-	0.89 (0.51–1.54); <i>p</i> =0.6879	-
<b>Interaction</b> Antibiotics*Cohort	-	<b>p=0.1950</b>	-
<b>PPIs</b> Yes vs No	-	-	0.95 (0.64–1.40); <i>p</i> =0.8133
<b>Interaction</b> PPI*Cohort	-	-	<b>p=0.0986</b>
<b>Gender</b> Male vs Female	0.84 (0.66–1.08); <i>p</i> =0.1858	0.84 (0.66–1.08); <i>p</i> =0.1889	0.85 (0.66–1.08); <i>p</i> =0.1956
<b>Age</b> Elderly vs Non-elderly	0.94 (0.75–1.19); <i>p</i> =0.6527	0.95 (0.76–1.20); <i>p</i> =0.7036	0.96 (0.76–1.21); <i>p</i> =0.7473
<b>ECOG PS</b> ≥2 vs 0-1	0.51 (0.36–0.73); <i>p</i> =0.0002	0.48 (0.34–0.69); <i>p</i> =0.0001	0.49 (0.34–0.70); <i>p</i> =0.0001
<b>Smoking status</b> Current/former vs Never	0.93 (0.64–1.33); <i>p</i> =0.6956	0.93 (0.65–1.33); <i>p</i> =0.7078	0.91 (0.64–1.32); <i>p</i> =0.6365
<b>CNS metastases</b> Yes vs No	1.24 (0.90–1.69); <i>p</i> =0.1815	1.04 (0.76–1.39); <i>p</i> =0.8188	1.09 (0.80–1.47); <i>p</i> =0.5962
<b>Bone metastases</b> Yes vs No	0.59 (0.46–0.76); <i>p</i> <0.0001	0.58 (0.45–0.74); <i>p</i> <0.0001	0.59 (0.46–0.76); <i>p</i> <0.0001
<b>Liver metastases</b> Yes vs No	0.59 (0.41–0.83); <i>p</i> =0.0028	0.58 (0.41–0.82); <i>p</i> =0.0021	0.55 (0.39–0.78); <i>p</i> =0.0008